## Block-it

This game "Block it" utilizes arrays, so it's great for multiplication, division, and area practice. It can have variations depending on the level of your students.

## Materials needed:

- 1. 1 grid paper (1/2" is great)
- 2. 2 players
- 3. Each player needs 1 crayon or colored pencil (light colored). Different color per player.
- 4. 2 number cubes or dice (6 sided).



## How to play:

- 1. Player 1 rolls the dice. Let's say a 3 and 4 are rolled. The player makes a 3 x 4 "block" or array. Be sure to show them how to use the lines on the grid paper to make this (as I discovered it's not always clear to some students). Color it in with crayon. Inside the block, write the product (12).
- 2. Player 2 then rolls the dice and uses their 2 numbers to create another block, colors it, labels it, etc.
- 3. Repeat
- 4. The goal is to create as many blocks / arrays as possible (more than the opponent). There is a strategy to maximize the use of the space. Repeated play helps children see they need to consider this so they don't end up with little unusable spaces.
- 5. As the board gets more full (with less places to fill in), players may have to miss a turn or roll again.

## Variations:

- 1. As the board gets filled up, students may need to think of alternate ways to make their blocks to fit the available space. For example, if the player rolls a 6 and 4 but there is no room to fit a 6 by 4 array, they can think of other ways to make an array of 24 that might work (such as 8 x 3, 12 x 2). So, knowledge of all the common factors is helpful.
- 2. Students can keep track of their score by keeping a running total of each block / array they make.
- 3. Use smaller size grid paper and use 9, 10, or 12-sided dice.
- 4. Write the fact family members for each block created.
- 5. Play again to practice more strategic placement of blocks.